

Applic. No.: 09/901,430
Amdt. Dated August 31, 2004
Reply to Office action of June 24, 2004

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-9 remain in the application. Claims 8-9 have been withdrawn.

In the section entitled "Claim Rejections - 35 USC § 103" on pages 2-5 of the above-mentioned Office action, claims 1 and 3 have been rejected as being unpatentable over Mares (US Pat. No. 4,275,030) under 35 U.S.C. § 103(a); claims 2 and 4-5 have been rejected as being unpatentable over Mares in view of Bertschi et al. (US Pat. No. 5,651,998) under 35 U.S.C. § 103(a); claims 6 and 7 have been rejected as being unpatentable over Mares in view of Hara et al. (US Pat. No. 5,277,865) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

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Claim 1 calls for, inter alia:

placing a first, high-strength material into one single shaping mold;

introducing a second material having a lesser strength than the first material into the mold with a process selected from the group consisting of casting and injection molding when the first material has a given amount of residual heat; and

bonding the first and second materials to a composite by utilizing the given amount of residual heat of the first material, producing the plastic component with a strength higher than said first material.

The process of Mares differs from the method of the invention of the instant application in the following aspects:

1. The object of producing a composite body from two plastic materials, the strength of which is higher than the strength of its individual constituent part, according to the invention of the instant application, is not disclosed in Mares. Rather, the object of Mares is to be able to produce a more complex product (see column 1, lines 25-27 of Mares).

2. The process of Mares concerns the production of an item consisting of three components (see column 1, lines 22-24). The plastic material last injected in the mold serves to bind the two components produced previously by

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injection molding, so that a uniform item formed from three parts is produced.

3. Nothing in Mares suggests that a composite is produced through a combination of different plastic materials, which has a new property (for example, a higher stability or strength of the composite product as recited in claims of the instant application) that is different from its individual component parts (stability/strength). Rather, the object of Mares is to produce an item that maintains the properties of the individual component parts. The Examiner has stated that Mares teaches the different colors of the plastic materials. However, in Mares the plastic materials of different color are used to produce a covering for tail lamps of a vehicle. The individual parts of the produced complex product should filter the white light in light of different colors. The object is, for example, that the covering transmits white light for a reversing-headlight and filters the white light of the stop lamp so that the light is perceived as red by human eyes. The object of Mares is not to produce a covering of mixed colors, which transmits only light of a compound color or of wavelength spectrum of a compound color. The effect of the claims of the instant

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application that a composite with higher stability/strength is produced from materials of different stability/strength is not disclosed or suggested anywhere in Mares.

4. The above effect is basically independent of the sequence in which the stabler/stronger material and the less stable/strong material are introduced in the mold. It is, however, especially advantageous to produce the product in the exact sequence as recited in the claims of the instant application in order to reach the improved stability/strength.
5. In addition, Mares only mentions the "soft state" in the background part of the specification (see column 1, line 41). In the description of the embodiment and claims of Mares, only the phrase "weldable to, upon contact" is used (see column 3, line 10, and column 4, line 15). It is even explicitly described in the description of the embodiment of Mares that "the third material [enters] through nozzles 3, which will form the central zone 13, such that on reaching the side zones and making contact with the internal edges of the first zones 11, and 12, a contact weld will occur between the different materials" (see column 2, lines 38-42). It can be derived that

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"soft state" only teaches a person skilled in the art to carry out the process in such a way that the surfaces, which contact the third material, are in a state allowing a fusible link with the third material. This, however, only means that the surfaces are not allowed to be passivated. It is not disclosed in Mares that the necessary energy for forming of the bonding with the later injected (third) material should come from the residual heat of the first material. Rather, a person skilled in the art is directed by Mares to provide the necessary energy to the third, later injected material because it should cause the weld.

With regard to claim 4 of the instant application, it is noted that the passages of Bertschi et al. cited by the Examiner (column 5, lines 56-67 and column 6, lines 18-31) do not describe a method in which the first plastic material component is inserted as a prefabricated component. In both of the cited passages, different plastic materials are injected in the mold. In the second cited passage, only a sheet 60 is inserted between the plastics. This sheet will, however, prevent the fusion of the two plastics. In addition, Bertschi et al. do not provide any hint that the sheet 60 is formed of the first material as required by claim 4 of the instant application for the prefabricated component.

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With regard to claims 6 and 7 of the instant application, Applicant would like to emphasize again that in Hara et al. two movable mold halves are needed to form the hollow space of the mold. This is in contrast to the feature "one single shaping mold" in claim 1 of the instant application. In addition, it is not understood why the Examiner has referred to the Patel reference, which is not cited in the Office action. A person skilled in the art does not obtain any motivation from Mares to consider the stability of the produced product. He or she is also not motivated to form a hollow portion in the product to be produced in order to reduce the weight. Rather, he or she will keep away from forming a hollow portion in the product through the cited example of the covering of the lamps. The hollow portion, depending on the location, would influence the optical transmission properties and produce a spotted appearance of the lamp covering, which is undesired.

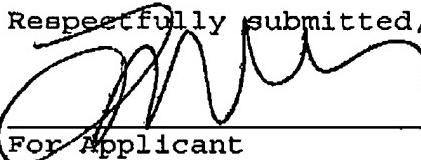
It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

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In view of the foregoing, reconsideration and allowance of claims 1-7 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

For Applicant

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